

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026***Sixth Semester**Computer Science and Engineering***CCS356 – OBJECT ORIENTED SOFTWARE ENGINEERING****(Common to Information Technology)***Regulations - 2021**Duration : 3 Hrs**Maximum : 100 Marks***PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	How the prototype Model is used for the software development?	L1	1	2
2.	State software process model.	L1	1	2
3.	What is the purpose of requirements gathering?	L1	2	2
4.	Define Finite State Machine.	L1	2	2
5.	What is the use of software design?	L1	3	2
6.	Mention the importance of user interface design.	L2	3	2
7.	What is integration testing?	L1	4	2
8.	How does model checking help in software verification?	L2	4	2
9.	Define Software Configuration Management.	L1	5	2
10.	Summarize the use of a Gantt chart in project scheduling.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Elaborate the process of Agile methodology and its advantages over traditional software development models.	L2	1	8
	ii Discuss in detail on software process models such as RAD Model and Incremental Model with an appropriate diagram.	L2	1	8
	Or			
	b i Discuss in detail on various key principles, practices, and benefits of Extreme Programming model in modern software development with neat sketch.	L2	1	8
	ii Explain different phases of the Software Development Life Cycle with an appropriate diagram.	L2	1	8
12.	a In real world, a software development company is struggling with code reusability, documentation, and debugging areas.	L3	2	16
	i. Recommend suitable CASE tools to improve efficiency.			
	ii. Analyze how CASE tools contribute to faster and error-free software development.			

Or

	b	i	Organize the significance of functional modeling in software engineering phase. How the data flow diagrams are used for representing the modeling with suitable examples.	L3	2	8
		ii	Consider a university is developing a Student Management System to manage student records, courses, and faculty. Each student has a unique ID, name, and department. Faculty members have an ID, name, and specialization. Identify key classes, attributes, relationships and design the class diagram.	L3	2	8
13.	a	i	Analyze the relationship between cohesion and coupling in achieving functional independence. Provide examples to illustrate how low coupling and high cohesion improve software design.	L4	3	8
		ii	Examine key principles of UI design such as consistency, feedback, simplicity, and visibility. How it can contribute to an effective software interface? Justify your answer.	L4	3	8
			Or			
	b		Consider that a hospital management system has multiple interconnected modules such as patient records, billing, and pharmacy. Evaluate how coupling and cohesion influence the system's maintainability. Criticize a design approach that balances modularity and system integration.	L3	3	16
14.	a		Assume a software development company is working on a large-scale banking application that involves multiple modules, including user authentication, transaction processing, account management, and report generation. Identify potential challenges in integration and system testing and suggest possible solutions.	L3	4	16
			Or			
	b		A retail e-commerce company is developing a web-based shopping application where users can browse products, add them to the cart, and complete the purchase through online payment. As a software tester, you are assigned to perform Black Box Testing for this application.	L3	4	16
		i.	Apply Equivalence Partitioning and Boundary Value Analysis (BVA) techniques to test the user login feature.			
		ii.	Identify at least three functionalities of the application that require black box testing and justify your answer.			
15.	a	i	Explain project scheduling in detail with examples.	L2	5	8
		ii	How the cloud as a platform provides scalable, flexible, and cost-effective solutions for businesses. Explain the major cloud operations, including resource management, security, automation, and performance monitoring with an example.	L2	5	8
			Or			
	b		Discuss in detail on how DevOps helps to bridge the gap between development and operations to ensure faster and more reliable software delivery. Elaborate the benefits of DevOps in project management, focusing on automation, collaboration, and continuous integration/deployment.	L2	5	16